INTERNATIONAL SEARCH REPORT

nai Application No PC1/1B2004/052599

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 H04R3/04

According to international Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

 $\begin{array}{ll} \mbox{Minimum documentation searched (classification system followed by classification symbols)} \\ \mbox{IPC 7} & \mbox{H04R} & \mbox{H04S} & \mbox{G10L} \end{array}$

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X .	US 4 182 930 A (BLACKMER, DAVID E) 8 January 1980 (1980-01-08) column 1, line 4 - column 7, line 54	1-4,6-9, 12,13,16
Υ	column 10, line 37 - column 15, line 40	5,10,11, 14,15
X	WO 00/45379 A (LILJERYD, LARS, GUSTAF; KJOERLING, KRISTOFER; EKSTRAND, PER; HENN, FRE) 3 August 2000 (2000-08-03) page 1, line 7 - page 5, line 25	1-3,6-8, 16
X	FR 2 762 180 A (CARRAT ROLAND ROGER) 16 October 1998 (1998-10-16) page 1, line 1 - page 7, line 34	1,3,6,8,

X Further documents are listed in the continuation of box C.	Patent family members are listed in annex.
Special categories of cited documents: A* document defining the general state of the art which is not considered to be of particular relevance E* earlier document but published on or after the international filling date L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) O* document referring to an oral disclosure, use, exhibition or other means P* document published prior to the international filling date but later than the priority date claimed	 *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family
Date of the actual completion of the international search	Date of mailing of the international search report
14 March 2005	22/03/2005
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2	Authorized officer
NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Peirs, K

INTERNATIONAL SEARCH REPORT

Inte nal Application No
PCT71B2004/052599

	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 111 960 A (AARTS ET AL) 29 August 2000 (2000-08-29) cited in the application column 1, line 6 - column 4, line 14 column 4, line 50 - column 10, line 47	1,2,6,7, 16
Υ		
Y	EP 0 441 642 A (NATIONAL RESEARCH DEVELOPMENT CORPORATION) 14 August 1991 (1991-08-14) column 1, line 2 - column 10, line 10	5,11,15
	·	

INTERNATIONAL SEARCH REPORT

Inte nal Application No
PCT/1B2004/052599

Patent document cited in search report	Publication date		Patent family member(s)	Publication date	
US 4182930	A 08-01-1980	CA	1102000 A1	26-05-1981	
		DE	2909352 A1	20-09-1979	
		FR	2419641 A1	05-10-1979	
		GB	2016248 A ,B	19-09-1979	
		JP	1300679 C	31-01-1986	
		JP	54127205 A	03-10-1979	
		JP	59024440 B	09-06-1984	
WO 0045379	A 03-08-2000	AU	2585600 A	18-08-2000	
110 00 10075		AU	2585700 A	18-08-2000	
		BR	0009138 A	27-11-2001	
		CN	1408109 A	02-04-2003	
		EP	1157374 A2	28-11-2001	
		ĒΡ	1408484 A2	14-04-2004	
		JP	3603026 B2	15-12-2004	
		ĴΡ	2002536679 T	29-10-2002	
		ĴΡ	2005010801 A	13-01-2005	
		WO	0045378 A2	03-08-2000	
		WO	0045379 A2	03-08-2000	
		ÜS	6708145 B1	16-03-2004	
		ĀŤ	276569 T	15-10-2004	
		DE	60013785 D1	21-10-2004	
		RU	2226032 C2	20-03-2004	
FR 2762180	A 16-10-1998	FR	2762180 A1	16-10-1998	
US 6111960	A 29-08-2000	CN	1193450 A	16-09-1998	
00 0111500		DE	69716216 D1	14-11-2002	
		DE	69716216 T2	10-07-2003	
		EP	0843951 A1	27-05-1998	
		WO	9742789 A1	13-11-1997	
		JP	11509712 T	24-08-1999	
EP 0441642	A 14-08-1991	GB	2240867 A	14-08-1991	
•		EP	0441642 A2	14-08-1991	
				11-06-1993	